

Amendments to the Claims:

1. (Currently Amended) A method for providing access to a wireless network system, wherein the wireless network system includes a plurality of wireless access points coupled enabling wireless connections to a network, the method comprising:

a first wireless access point receiving identification information from a portable computing device in a wireless manner, wherein the portable computing device and the first wireless access point communicate using wireless Ethernet, wherein the identification information indicates a VLAN, wherein the first wireless access point is operable to implement a plurality of possible VLANs;

the first wireless access point determining the indicated VLAN from the plurality of possible VLANs according to the identification information;

the first wireless access point receiving data from the portable computing device in a wireless manner;

the first wireless access point using the indicated VLAN to provide the data received from the portable computing device to a destination;

receiving wirelessly at a wireless access point identification information from a portable computing device, wherein:

the wireless access point and the portable computing device communicate using wireless Ethernet,

the wireless access point is operable to implement a plurality of Virtual Local Area Networks (VLANs),

each of the VLANs is operable to enable portable computing devices to connect wirelessly to the network, and

the identification information identifies a particular one of the VLANs;

determining at the wireless access point the particular one of the VLANs identified in the identification information;

receiving wirelessly at the wireless access point data from the portable computing device; and

transmitting by the wireless access point the data to a network service provider destination using the particular one of the VLANs.

2. (Currently Amended) The method of claim 1, further comprising:
determining at the wireless access point a first network service provider for the portable computing device after receiving based on the identification information;
wherein the first wireless access point provides transmits the data received from the portable computing device to the destination of based on the determined first network service provider.

3. (Currently Amended) The method of claim 2, wherein the first network service provider is determined based on the indicated particular one of the VLANs identified in the identification information.

4. (Original) The method of claim 1, wherein said identification information comprises a digital certificate.

5. (Original) The method of claim 1, wherein said identification information comprises an IEEE 802.11 system identification.

6. (Original) The method of claim 1, wherein said identification information comprises a media access control (MAC) identification.

7. (Original) The method of claim 1, wherein said identification information comprises a known geographic location of the portable computing device.

8. (Canceled)

9. (Currently Amended) A method for providing access to a wireless network system, wherein the wireless network system includes a plurality of wireless access points coupled enabling wireless connections to a network, the method comprising:

a first wireless access point receiving identification information from a portable computing device in a wireless manner, wherein the portable computing device and the first wireless access point communicates using wireless Ethernet, wherein the identification information indicates a network provider of a plurality of possible network providers, the first wireless access point configured to provide access to the plurality of possible network providers;

determining the network provider from the plurality of possible network providers for the portable computing device based on the identification information;

the first wireless access point receiving data from the portable computing device in a wireless manner;

providing the data received from the portable computing device to a destination based on the determined network provider;

receiving wirelessly at a wireless access point identification information from a portable computing device, wherein:

the wireless access point and the portable computing device communicate using wireless Ethernet,

the wireless access point is operable to provide portable computing devices access to a plurality of network service providers,

each of the network service providers is operable to enable portable computing devices to connect wirelessly to the network, and

the identification information identifies a particular one of the network service providers;

determining at the wireless access point the particular one of the network service providers identified in the identification information;

receiving wirelessly at the wireless access point data from the portable computing device;
and

transmitting by the wireless access point the data to a destination of the particular one of the network service providers.

10. (Currently Amended) The method of claim 9, further comprising:
~~wherein the wireless network system includes a memory medium which stores a data structure comprising a list of identification information indicating one or more network providers of the plurality of possible network providers;~~
~~wherein said determining the network provider for the portable computing device includes accessing the memory medium and using the received identification information to determine the network provider.~~

storing at a memory medium communicatively coupled to the network a data structure comprising network service provider information regarding the network service providers;
wherein determining at the wireless access point the particular one of the network service providers identified in the identification information comprises accessing by the wireless access point the network service provider information stored at the memory medium.

11. (Original) The method of claim 10, wherein the data structure comprises a Management Information Base.

12. (Currently Amended) The method of claim 10, wherein the data structure stores a destination address indicating a destination specified by the network provider; wherein
~~said providing the data comprises providing the data to the destination specified by the network provider.~~ of the destination of the particular one of the network service providers.

13. (Currently Amended) The method of claim 9, further comprising:
storing at a memory medium communicatively coupled to the network a data structure comprising the network service providers, network service provider information regarding the network service providers, wherein the network system includes a memory medium which stores a data structure comprising a list of identification information, a corresponding list of the

plurality of possible network providers, and associated methods for providing data to the respective plurality of possible network service providers;

wherein said determining the network provider for the portable computing device includes accessing the memory medium, using the received identification information to determine the network provider, and using an associated method for providing the data to the network provider.

wherein:

determining at the wireless access point the particular one of the network service providers identified in the identification information comprises accessing by the wireless access point the data structure stored at the memory medium, and

the data are transmitted to the destination of the particular one of the network service providers by the wireless access point using the a particular one of the associated methods for providing data to the particular one of the network service providers.

14. (Currently Amended) The method of claim 9, further comprising:

wherein the wireless network system comprises a management information base (MIB) coupled to the network, wherein the MIB stores a data structure comprising a list of identification information indicating one or more network providers of the plurality of possible network service providers;

wherein said determining the network provider for the portable computing device includes accessing the MIB and using the received identification information to determine the network service provider.

storing at a management information base (MIB) communicatively coupled to the network a data structure comprising network service provider information regarding the network service providers;

wherein determining at the wireless access point the particular one of the network service providers identified in the identification information comprises accessing by the wireless access point the network service provider information stored at the MIB.

15. (Currently Amended) The method of claim 14, wherein the data structure stores a destination address indicating a destination specified by the network provider; wherein said providing the data comprises providing the data to the destination specified by the network provider, of the destination of the particular one of the network service providers.

16. (Original) The method of claim 9, wherein said identification information comprises a digital certificate.

17. (Original) The method of claim 9, wherein said identification information comprises an IEEE 802.11 system identification.

18. (Original) The method of claim 9, wherein said identification information comprises a media access control (MAC) identification.

19. (Original) The method of claim 9, wherein said identification information comprises a known geographic location of the portable computing device.

20. (Currently Amended) A method for providing selective access to network resources in a distributed wireless network system, wherein the wireless network system includes a plurality of access points coupled to a network, wherein the plurality of access points are arranged at known locations in a geographic region, the method comprising:

a first access point receiving at one of the access points identification information from a portable computing device, wherein:

the first one of the access points is configured to provide portable computing devices access to a plurality of possible network service providers, and

each of the plurality of network service providers is operable to enable portable computing devices to connect wirelessly to the network;

determining[[.]] by the first one of the access points[[.]] an indicated network service provider from the plurality of possible network service providers according to the identification information;

the first access point providing by the one of the access points geographic location information indicating a known geographic location of the portable computing device;

determining a charge for the portable computing device to gain access to the network service provider based on the identification information and the known geographic location of the portable computing device; and

using the indicated network service provider to provide data received from the portable computing device to a destination.

21. (Currently Amended) The method of claim 20, wherein the identification information received from the portable computing device indicates the indicated network service provider ~~of a~~ from the plurality of possible network service providers;

wherein said determining a charge for the portable computing device is based on the indicated network service provider and the known geographic location of the portable computing device.

22. (Canceled)

23. (Original) The method of claim 20, wherein said identification information comprises a digital certificate.

24. (Original) The method of claim 29, wherein said identification information comprises an IEEE 802.11 system identification.

25. (Original) The method of claim 20, wherein said identification information comprises a media access control (MAC) identification.

26. (Currently Amended) A network system, comprising:
a network; and
one or more wireless access points coupled to the network,
wherein each of the one or more wireless access points is operable to communicate using
wireless Ethernet with one or more computing devices,
wherein each of the one or more wireless access points is configured to receive
identification information from a computing device of the one or more computing devices
indicating a network service provider of a plurality of possible network service providers,
wherein each of the one or more wireless access points is configured to provide access to
the plurality of possible network service providers,
wherein each of the plurality of possible network service providers is configured to
enable particular ones of the one or more computing devices to connect wirelessly to the
network;
wherein each of the one or more wireless access points includes a memory medium
which stores a data structure, wherein the data structure comprises a list of identification
information entries and corresponding network service providers, wherein each entry indicates a
respective network service provider of the plurality of possible network service providers;
wherein each of the one or more wireless access points is operable to determine the
network service provider indicated by the identification information from the plurality of
possible network service providers;
wherein, in determining the network service provider for the portable computing device,
each of the one or more wireless access points is operable to access the memory medium and use
the received identification information to determine the network service provider;
wherein network access is provided to the computing device through the indicated
network service provider.

27. (Currently Amended) The network system of claim 26, wherein the data structure
further stores a respective network service provider for each identification information entry;

wherein, in determining the network service provider for the computing device, each of the one or more wireless access points is operable to index into the data structure using the identification information to determine the network service provider stored in the data structure corresponding to the identification information.

28. (Original) The network system of claim 26, wherein said identification information comprises an IEEE 802.11 system identification.

29. (Original) The network system of claim 26, wherein said identification information comprises a media access control (MAC) identification.

30. (Original) The network system of claim 26, wherein said identification information comprises a known geographic location of the portable computing device.

31. (Original) The network system of claim 26, wherein said identification information comprises a digital certificate.

32. (Original) The network system of claim 26, wherein a subset of the one or more portable computing devices are portable computing devices.

33. (Original) The network system of claim 26, wherein at least a subset of the one or more wireless access points are operable to concurrently use a plurality of radio frequency (RF) channels.

34. (Original) The network system of claim 33, wherein a first wireless access point of the subset is operable to assign one or more RF channels for communication with a computing device.

35. (Original) The network system of claim 34, wherein the first wireless access point is operable to assign the RF channel based on the identification information received from the computing device.

36. (Currently Amended) The network system of claim 34, wherein the first wireless access point is operable to assign the RF channel based on the determined network service provider.

37. (Original) The network system of claim 34, further comprising:
wherein the first wireless access point is operable to determine an access level for the computing device after receiving the identification information; and
wherein the first wireless access point is operable to assign a RF channel for communication with the computing device based on the determined access level.

38. (Original) The network system of claim 34, wherein the first wireless access point is operable to concurrently:

communicate with a first computing device of the one or more computing devices using a first RF channel of the plurality of RF channels;
communicate with a second computing device of the one or more computing devices using a second RF channel of the plurality of RF channels.

39. (Original) The network system of claim 38, wherein the first RF channel and the second RF channel are different RF channels.

40. (Original) The network system of claim 39, wherein the first RF channel and the second RF channel are non-overlapping RF channels.

41. (Original) The network system of claim 33, wherein at least a subset of the identification information entries each indicate at least one RF channel.

42. (Original) The network system of claim 41, wherein the indicated RF channel is used in providing network access.

43. (Currently Amended) The network system of claim 33, wherein the data structure further stores a respective RF channel for each identification information entry;

wherein, in determining the network service provider for the computing device, each of the subset of the one or more wireless access points is operable to index into the data structure using the identification information to determine the RF channel stored in the data structure corresponding to the identification information;

wherein each of the subset of the one or more wireless access points is operable to assign a RF channel indicated by the data structure for each identification information entry.

44. (Currently Amended) A wireless access point for providing network access to one or more computing devices, wherein the wireless access point is operable to be coupled to a network, wherein the wireless access point is operable to communicate with a computing device of the one or more computing devices, wherein the wireless access point is configured to receive identification information from the computing device indicating a network service provider of a plurality of possible network service providers, wherein the wireless access point is configured to provide access to the plurality of possible network service providers, wherein the wireless access point includes a memory medium operable to store a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers;

wherein the wireless access point is operable to determine the network service provider indicated by the identification information from the plurality of possible network service providers;

wherein each of the plurality of possible network service providers is operable to enable particular ones of the one or more computing devices to connect wirelessly to the network;

wherein, in determining the network service provider for the computing device, the wireless access point is operable to access the memory medium and use the received identification information to determine the network service provider;

wherein the wireless access point is operable to provide data received from the computing device to a destination based on the determined network service provider;

wherein network access is provided to the computing device through the destination.

45. (Currently Amended) The wireless access point of claim 44, wherein the wireless access point is useable by subscribers of each of the plurality of possible network service providers.

46. (Currently Amended) The wireless access point of claim 44, wherein the determined network service provider charges for access by the computing device to the network.

47. (Currently Amended) The wireless access point of claim 44, wherein the data structure further comprises associated methods for providing data to the respective plurality of possible network service providers;

wherein, in determining the network service provider for the computing device, the wireless access point is operable to access the memory medium, use the received network service provider identification information to determine the network service provider, and use an associated method for providing the data to the determined network service provider.

48. (Currently Amended) The wireless access point of claim 44, wherein the identification information comprises a System ID of the computing device, wherein the System ID uniquely identifies a network service provider of the plurality of possible network service providers.

49. (Original) The wireless access point of claim 44, wherein the wireless access point is operable to provide the data to the destination in a secure manner.

50. (Original) The wireless access point of claim 44, wherein the wireless access point is at a known location in a geographic region, wherein the wireless access point is operable to provide geographic location information indicating a known geographic location of the computing device;

wherein network access is selectively provided to the computing device based on the known geographic location of the computing device.

51. (Original) The wireless access point of claim 44, wherein at least a subset of the identification information entries each indicate at least one VLAN.

52. (Currently Amended) The wireless access point of claim 51, wherein each VLAN specifies a network service provider.

53. (Original) The wireless access point of claim 52, wherein the indicated VLAN is used in providing network access.

54. (Original) The wireless access point of claim 44, wherein said identification information comprises a digital certificate.

55. (Original) The wireless access point of claim 44, wherein said identification information comprises an IEEE 802.11 system identification.

56. (Original) The wireless access point of claim 44, wherein said identification information comprises a media access control (MAC) identification.

57. (Original) The wireless access point of claim 44, wherein said identification information comprises a known geographic location of the computing device.

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58. (Original) The wireless access point of claim 44, wherein the wireless access point is operable to provide the data to the destination utilizing Layer 2 forwarding.

59. (Original) The wireless access point of claim 44, wherein at least a subset of the identification information entries each indicate at least one tunneling protocol, wherein the wireless access point is operable to provide the data to the destination utilizing a tunneling protocol.

60. (Original) The wireless access point of claim 59, wherein the tunneling protocol is PPTP.

61. (Original) The wireless access point of claim 59, wherein the tunneling protocol is IPSEC.

62. (Original) The wireless access point of claim 59, wherein the tunneling protocol is GRE.

63. (Original) The wireless access point of claim 59, wherein the tunneling protocol is IP-in-IP.

64. (Original) The wireless access point of claim 44, wherein the wireless access point is operable to provide the data to the destination utilizing a tagged VLAN.

65. (Original) The wireless access point of claim 44, wherein the computing device is a portable computing device.

66. (Currently Amended) The wireless access point of claim 44, wherein the wireless access point is further configured to receive a plurality of different sets of identification information corresponding to the plurality of possible network service providers,

wherein selected sets of the plurality of different sets of identification information are recognized by the wireless access point, and wherein selected sets of the plurality of different sets of identification information are not recognized by the wireless access point.

67. (Currently Amended) The wireless access point of claim 66, wherein the wireless access point is further configured to select a default network service provider for each received set of identification information that is not recognized by the wireless access point.